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ABSTRACT

A needs assessment project being conducted in Jacksonville, Florida and at Florida Junior College is described. The major intent of the project is stated to be the development of a valid, computerized model which will enable an educational system to research the educational needs of its community and to develop quantified data for decision-making. The report reviews selected research literature and lists the objectives and benefits which flow from such a needs assessment. Major project procedures are outlined, including site selection, methods of data acquisition, the development of baseline and critical decision-making data, and means of updating the data file. The developmental sequence for the proposed model is also described, beginning with the data base's development, proceeding through the stages of protopype evolution, and concluding with the testing, revision and complete documentation of the model. Lastly, the educational significance of such a model is discussed. (PB)

EDUCATIONAL NEEDS ASSESSMENT, A SIMULATION MODEL FOR HUMANISTIC PLANNING

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INTRODUCTION

Needs Assessment is a project aimed at everyone who is denied fulfillment of his potential by providing ammunition to influence planners, administrators, boards, teachers, et al, to examine their attitudes in light of "effective" humanized education service.

For too long, the needs being met by the educational system have been those needs implied from the past by evaluating the existing course offerings and emphasizing general academia, rather than evaluating the individual needs for curriculum change based on community improvement. Educators have rarely been aware of the educational needs of the changing community they serve and their planning efforts have suffered accordingly.

Education can no longer hope that it is meeting the needs of all the people. It must know! Education must create a method to evaluate what the needs are, which needs are most important, and how they can be best met. If the educational system wishes to continue to serve as the agent for shaping each person into a valuable, well-adjusted, and productive citizen, it must develop a vehicle to methodically determine the changing needs of society, and give valid results with which decision makers can change the internal functions of education.

Since resources must be allocated within budget constraints, the educational system, in order to make effective decisions, must not only be aware of resource requirements but also the value of one service as compared to another.

This paper presents the approach to be taken in developing the Needs Assessment model in three parts: A description of the study with a review of related literature, the procedure to be followed in the analysis and computerization of the simulation model, and the significance of the Needs Assessment model to the educational system and society.

DESCRIPTION OF STUDY AND VALUE

The educational system has existed to help the individual realize his full potential through self-improvement and skill training. However, the offerings of education often fail to meet the needs according to the priorities of the community served.

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For too long, the needs being met by the educational system have been those needs vociferously expressed by a selective group of active citizens. Therefore, educators rarely are aware of the educational needs of all citizens - especially those citizens who lack a truly effective voice in the educational process.

Change for the sake of change is not the answer. Millions of dollars have been spent in the attempt to reach and to serve, with no real attempt being made to determine what the true needs are. Educators must have an in-depth, objective, consistent vehicle to dynamically evaluate the educational needs of all the community - not just the needs of one segment of the community, who by virtue of birth or position is most audible.

The Needs Assessment Project (NAP) will provide the vehicle through the development of a computerized simulation model by which the community educational needs can be sensed. The model will be developed using a community college as the prototype, and will be flexible for replication in any educational system. The community college was chosen because it is an institution working to fill the gap left in the formal education system. Its curriculum is broad, encompassing community interest courses, career education programs, technical and adult continuing education programs, university transfer courses and both pre-professional and para-professional training.

The model's primary purpose is to classify, organize, and prioritize community needs so that the educational system can assign these needs to the proper administrative unit for changes to be planned and implemented.

The broad objective is to develop a model that will allow the educational system to: (a) rank the community's educational needs in their order of importance, (b) develop alternative plans to meet those needs, (c) determine budget allocation guidelines according to need priorities, (d) monitor the benefit or value of a need as compared to its cost, i.e., discover if fulfilling a need is economically feasible, and (e) develop a continuing, dynamic system to evaluate the educational system's effectiveness in meeting community needs.

The following details the objectives, as well as lists specific benefits of the comprehensive model to education and the communities served by the educational system.

OBJECTIVES

1. Develop a data collection model to determine needs of the total population.

2. Establish a hierarchy of community education needs.

3. Relate the assessed needs according to the geographical distribution of the community population characteristics.

4. Enable education to compare its present status with the assessed needs identified by the study.

5. From assessed needs, state measurable, meaningful goals and objectives that can be interpreted into short and long range plans.

6. Develop and apply cost/utility analysis to acceptable alternatives designed to meet objectives.

7. Implement selected solution from alternatives to meet each objective.

8. Monitor the results of implemented solutions to evaluate effectiveness through follow-up analysis (validity of data).

9. Give direction for "new money requirements" when priorities are beyond budget constraints.

10. Improve community relations through greater understanding and involvement with the educational system.

11. Improve lines of communications between the community and the total educational system, leading to continuous educational exchange.

12. Increase awareness of administrator as to how their educational institution can meet community needs through an improved management process.

BENEFITS

Individual Educational Systems:

1. Bring Needs Assessment into the administrative process as a successful on-going division serving as a constant and valid link between institutions of education and community.

2. Increase the emphasis on information sharing among administrators, de-emphasize autonomy, stress freedom of operation.

3. Encourage use of advanced technology allowing the administration to make direct use of the Needs Assessment's continuous findings.

4. Show that needs data can become more variable by using alternatives derived from advances in technology and data gathering methods.

5. Provide for better course offerings on a long-range sequential planning scale to assist students in their course sequence planning, thereby enabling them to enter the employment market on a planned schedule.

6. Encourage more innovation and flexibility in scheduling course offerings and in making long-range projections. This can assist administrators in:

    (a) determining the number of instructors needed,

    (b) achieving the fullest possible utilization of facilities,

(c) making faculty retraining and placement more effective,

(d) increasing the student's choice of course offerings, and

(e) improving teacher selections based on student and community needs.

7. Make available timely information to the various administrations so that faculty training and coordination can be brought in line with the priority of needs.

8. Improve total student services through better information as to community needs.

Community:

1. Provide geographic breakdowns concerning the needs of the community so specific needs can be determined for each area.

2. Provide a capable, well-adjusted student to fill a real community need.

3. Bring about within the community a more favorable impression of education, resulting in voluntary action and involvement on the part of the community.

4. Increase community awareness of its own needs in terms of:

(a) growth and its effect on the employment market,

(b) social pride and citizenship,

(c) cultural involvement and appreciation,

(d) a sound community economy,

(e) ecological requirements for community improvement,

(f) communication among the many heterogeneous groups to minimize the gap in socio-economic differences (low income vs. high income, educated vs. non-education, veteran vs. non-veteran, laborer vs. professional, etc.),

(g) a joint community planning effort, and

(h) a reduction of apathy, misunderstanding, and breakdowns in communication.

Infinite Education Exchange (Total Sharing):

1. Links among the community educational information systems will:

(a) provide optimum information sharing,

(b) eliminate duplication of effort,

(c) provide better planning and input data for decision making, and

(d) create better inter-institutional relationships.

2. Educational institutions will be better able to:

(a) relate to one another through planning flexibility in the curriculum,

(b) provide students with more transfer mobility,

(c) reduce rigidity of programs,

(d) emphasize individual student needs rather than fixed academic requirements, and

(e) improve transferability of financial aid, thus helping the disadvantaged of the community.

3. The information flow for planning, organizing, and evaluating long-range curriculum will be provided via a computerized simulation model to:

(a) improve budgeting techniques,

(b) project long-range objectives accurately,

(c) improve facility planning,

(d) allocate human resources accurately, and

(e) utilize resources optimally through a humanistic systems approach.

4. The value of the model to the individual citizen will be evident through an increase in the number of expressed community needs and a decrease in the time interval between an expressed need and the educational system's meeting that need.

Related Research:

A review of literature indicates that the identification of educational needs has become a focal point in community and educational conferences and assemblies (1). Legislatures and state departments have also begun to state their concern for immediate efforts in Needs Assessment. In Florida, the Department of Education has clearly stated its commitment to a program of statewide needs assessment. The Department stated that:

> "The effort to secure clear goals and objectives is supported at the state level by needs assessment activities designed to identify broadly those goals which education should pursue and to collect information for assigning priorities. Such needs assessment encompass general education, occupational education, and advanced professional education." (6, pg. 10)

At the national level, President Nixon . . .

> in an address to Congress on March 3, 1970, stated, "the greatest need in the school systems of the nation is to begin the responsible open measurement of how well the educational process is working". (4, pg. 24)

In California, studies similar in purpose to the Needs Assessment Project are being conducted by the North California Development Center in Chico. In 1972, they published a manual titled "Educational Goals and Objectives - A Model Program for Community and Professional Involvement". (5) It is considered a program to measure and rank community needs, setting goals and objectives, based entirely on the opinions of a cross section of the community. Needs Assessment will go beyond this initial step by collecting actual community data, place emphasis on the dynamic nature of the model to continually monitor the community, evaluate the effectiveness of education in meeting needs, and incorporate cost-benefit analysis.

A project complementary to NAP was proposed in 1964 and today is known as National Assessment. (14, 15) The first six years of the project were focused on information gathering and in the fall of 1969, data collection in three subject areas began. Development of the information dissemination activities, however, are still in the early stages.

National Assessment begins with the basic premise that educational needs and goals are already determined. Thus, their project concentrates on the setting of standards by which students from across the country can be measured. While this is a worthwhile project, NAP will differ in two respects. First, NAP will assess actual needs and provide the information to help set more realistic goals. Second, NAP, while developing a model that can be generalized to all areas of the nation, is not concerned with national needs. Its primary purpose is to determine community needs and aid community educational systems in best meeting those needs.

Battelle Memorial Institute in "A Survey of Educational Needs," (18) developed a questionnaire covering all aspects of the community college, from management analysis to course requirements. This questionnaire was designed for a cross section of administrators, parents, students and community groups. While this procedure established an important vehicle for feedback from the community, it did not provide the type of in-depth information that is needed for a constructive needs assessment and also lacks a dynamic feature of continuous updating. Needs Assessment must be an on-going effort if it is to keep education in touch with the changing needs of the community.

The National Laboratory For Higher Education has developed a tool for the involvement of community groups in the process of assigning priority to educational goals. (2, 3) GOALS (Goal Setting for Organizational Accountability: A Leadership Strategy) emphasizes face-to-face communication with up to 30 participants representing community and college.

The purpose is to reach an overall consensus on the rank order of Overall Purpose Goals, Institutional Ends Goal, and Management Support Goals.

The major constraints of this model are: (1) it has predetermined the set of goals from which to choose: and (2) it assumes that a maximum of 30 people represent a sufficient cross section of the community such that the consensus they reach will be unbiased. However, the model does have a value in establishing an initial assumption in terms of overall educational goals (evaluation over time will establish the actual goals) and further study of its implications for NAP will be necessary.

Louis Parker, (17) in his doctoral dissertation, looks at different mechanisms that have been used for innovation in many fields and their application to educational innovation. He is primarily concerned with the innovator himself, describing him as an "innovational champion," and the best ways which he or she can operate to achieve desired change. Parker is primarily considering the second step of a two step process; i.e., what the innovator must do after he has recognized the need for change. NAP complements his concern with the first step, that of providing the information necessary to recognize those needs.

Walter J. Foley, (8) as principal investigator of a Management Information System Project under an Office of Education grant, is interested in developing an MIS covering all aspects of the educational process. A specific area of interest in this system is titled "Missions and Goals Statement." In it, Foley is concerned with developing a system that would be responsive to the information needs of decision-makers. He recognizes the need for the development and construction of a common data base and the need for making information gathering an on-going process. This study appears to have major implications to NAP in establishing the educational data bank for (a) Resources, (b) Financial Allocation, (c) Pupil requirements, (d) Personnel requirements and (e) Instructional programs. Needs Assessment will move beyond the immediate education system, however, to draw data from the total community concerning prospective students, trends in skill needs for the community, and the changing social-cultural environment.

The Needs Assessment Project offers a different approach to the assessment of educational needs. It focuses on the community from which education draws its input and into which it sends its output. NAP upon its completion will act as a catalyst between the community and the educational system, providing an unbiased medium in which the two can interact to better solve problems and meet community educational needs.

One of the strongest of these needs has been highlighted by United States Commissioner of Education, Sidney Marland. He charged that half of the high school students in the United States are being offered "what amounts to irrelevant general educational pap." He stated that although the educational system is largely geared toward college preparation, only 20 percent of the students ever receive a degree. Of the other 80 percent, fully one-half receive no occupational training (21, pg. 1).

Thus, 40 percent of all students leaving school have been given no training with which to find a job and no background to rely on if the need to change jobs ever arises. The effort must be made to find

these people, to draw them back into the educational system and to provide them with the skills necessary to find a job equal to their capabilities and to smoothly make transitions between jobs. The Needs Assessment Project, through the measurement of community needs and the evaluation of the educational system, is making this effort.

PROCEDURE

To develop a simulation model that is realistic and to evaluate the effectiveness of the computerized model in sensing educational needs, an educational system must be selected for analysis and implementation. That system will be Florida Junior College. The Jacksonville area will provide the community base in which the model will operate.

Florida Junior College and Jacksonville are chosen because of their size, complexity, and responsiveness to Needs Assessment. The needs in Jacksonville are dynamically changing as a result of the industrial expansion and population boom. (11) Jacksonville, the "Gateway to Florida," is one of the foremost transportation and distribution centers in the Southeast. Population growth has been a persistent element in the total area for the past 100 years. The problems brought on by the population explosion (528,865 in 1970) (20) have fallen into many areas in addition to education such as taxation, bond indebtedness, public works, inadequacies, recreation and health needs, public safety, and crime delinquency. Because of the widespread effect on all citizens of this area, much concern is being generated about keeping pace with the changing community needs. If the population continues to rise (and it is expected to double by 1990), then the changing population distribution, shifting the emphasis in educational needs, must be continuously studied and improved. (9, pg. V) The most severe problems are concentrated in the inner city, but suburbia is contributing significantly to the changing needs also.

Florida Junior College, as a comprehensive community educational system, can effectively serve as the prototype for the overall model development. It is a multi-campus institution with over 100 community centers located throughout the city to serve the broad area covered by consolidated Jacksonville, the largest incorporated city in the nation. Florida Junior College opened its doors in September, 1966 with 2,579 students. (16) In 1971-72, 41,543 students were enrolled. (7) It is expected that the enrollment will reach 65,000 by 1980. Thus, it becomes extremely important that the allocation of resources and planned curriculum reflect the educational needs of the extremely diverse groups that constitute the potential student body.

It is on the basic assumption that Jacksonville and Florida Junior College indeed provide a reliable base for the development of a computerized simulation model that they are proposed for use in the prototype. The macro approach that will be built into the model to accommodate the many aspects of the community will be all-encompassing and result in an in-depth, total simulation model, replicable throughout the country.

Data Acquisition and Analysis

There will be three approaches taken in data acquisition and analysis. These are the collection of baseline data, identification of critical decision making data, and continuous updating data files. The purpose of the modular approach to the data base is to move from using past data to predict future, to using present data to predict future -- a major achievement.

Baseline Data

The retrieval of existing data from already well-studied areas will be accomplished. (See Figure 1 for the data base collection in flowchart form.) This, of course, is a time-consuming effort since decisions must be made about the data available based on the quality, relevance, and iterative approaches for keeping the data current. The preliminary stage in analysis of existing data will be through the use of census information available in summary tapes.

Data will be retrieved through DUALABS-MOD3 (10) programs, merged and converted for mapping by MATCH (19, pg. 128), and mapped to gain visual perspective as to geographic relationships via SYMAP. (12)

Knowledge of factors unique to certain areas could play an important role in the final assessment of needs by locale, as well as portray where to locate new services. It could be that changes will be occurring that will have a major effect on population shift, population growth, the emphasis in education, etc., that only the professional planners of the community have knowledge about. Therefore, the professional planners involved in schools and the total education of the community should be included in the study of community needs to insure that the model represents the changing and growing population.

The factors used for the analysis of educational needs must be dynamic so that changes can be made constantly to reflect the changing community requirements occurring through time. Some of the factors that should be studied include future school population projections in each area, planned traffic patterns and transportation networks, land use changes and land costs (costs now and projected future costs), basic demographic characteristics, planned industrial suburb movement, shifting community interests, new skills needed, and changing economic emphasis.

Critical Decision-Making Data

The second form of data acquisition involves the identification of college goals and objectives in terms of budget allocation. It also requires an analysis of present data collected and implications for further variables that must be collected in order to create a matrix of present priorities. The community becomes involved in this stage in moving the present priority listing of educational needs toward a convergence of what the priority listing should be to better meet community needs. This requires the breakdown of all segments of the college and community to better analyze needs by category.

Continuous Updating Data File

The last form of data acquisition is the most important in that it establishes a centralized concept for maintaining a file of future educational needs. This file is two-fold: (1) Prospective student needs and (2) prospective employment needs. The exact manner of sensing these community needs will require an in-depth analysis of the community; logical, common-sense planning; a study of other systems throughout the nation that may give insight; and an on-going testing, evaluation and feedback for corrective action process for improving the centralized concept to data acquistion.

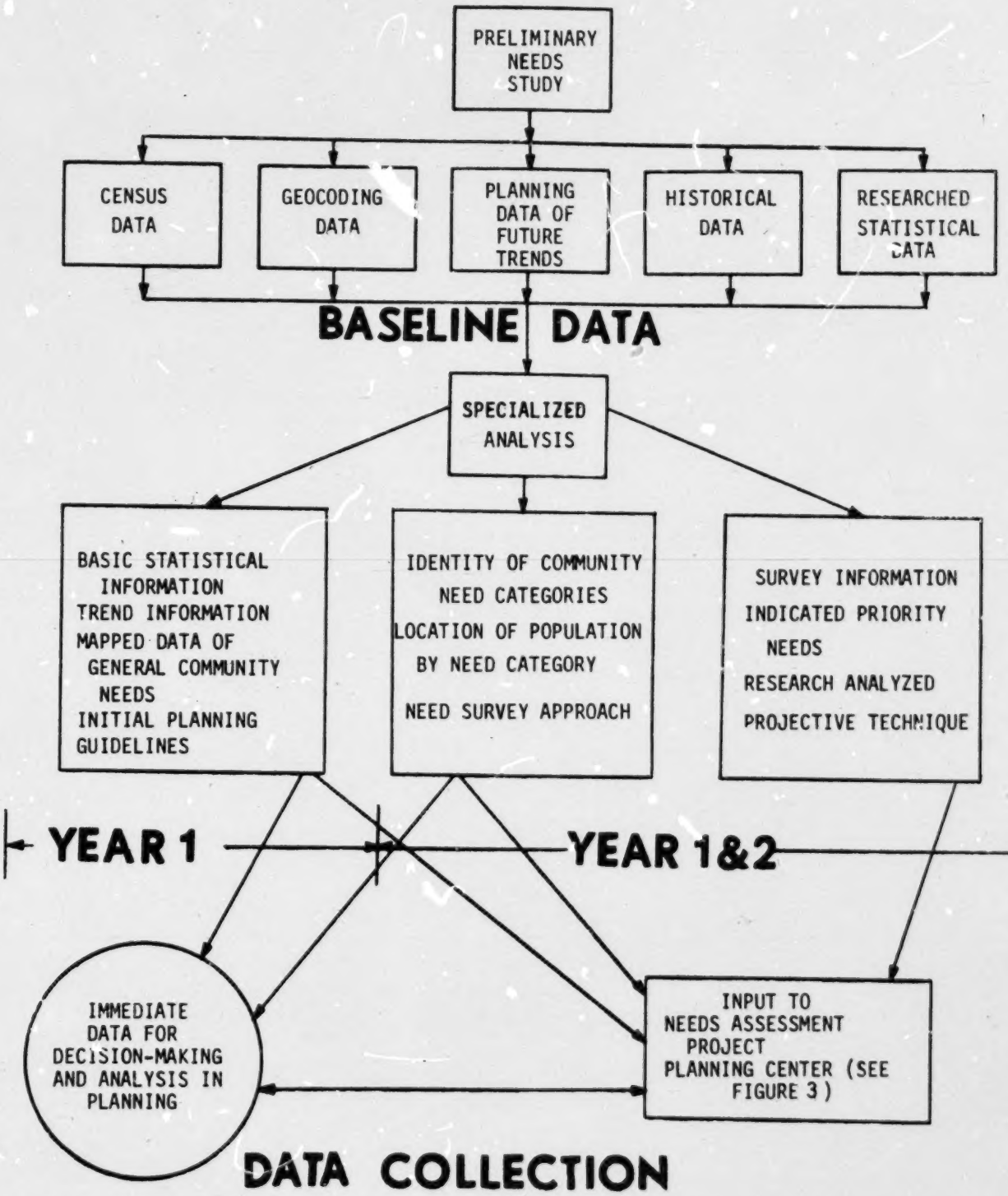

PRELIMINARY NEEDS STUDY
CENSUS DATA
GEOCODING DATA
PLANNING DATA OF FUTURE TRENDS
HISTORICAL DATA
RESEARCHED STATISTICAL DATA
BASELINE DATA
SPECIALIZED ANALYSIS
BASIC STATISTICAL INFORMATION
TREND INFORMATION
MAPPED DATA OF GENERAL COMMUNITY NEEDS
INITIAL PLANNING GUIDELINES
IDENTITY OF COMMUNITY NEED CATEGORIES
LOCATION OF POPULATION BY NEED CATEGORY
NEED SURVEY APPROACH
SURVEY INFORMATION INDICATED PRIORITY NEEDS
RESEARCH ANALYZED PROJECTIVE TECHNIQUE
YEAR 1
YEAR 1&2
IMMEDIATE DATA FOR DECISION-MAKING AND ANALYSIS IN PLANNING
INPUT TO NEEDS ASSESSMENT PROJECT PLANNING CENTER (SEE FIGURE 3)
DATA COLLECTION

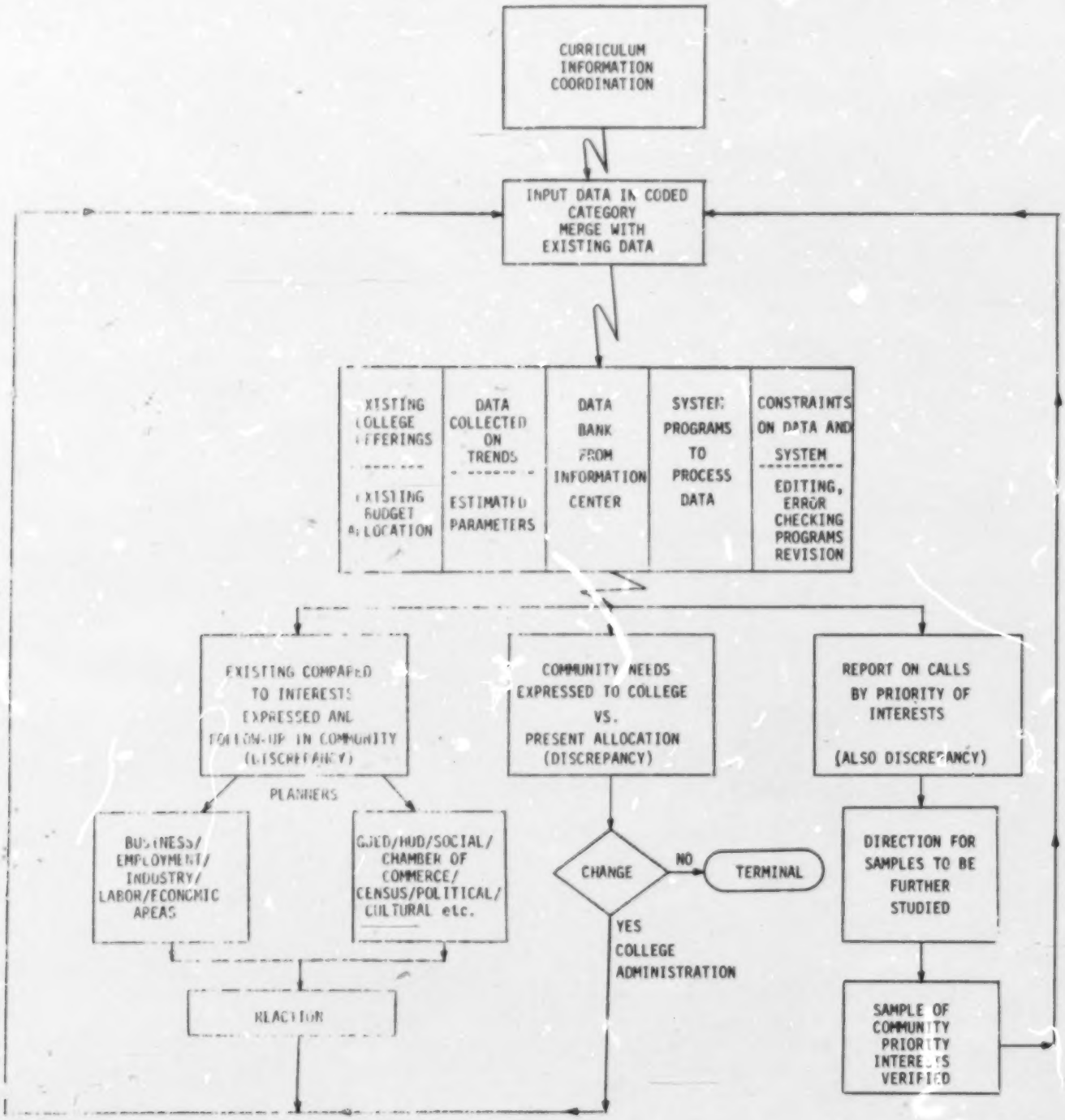
FIGURE 1

At present, the hypothesis is that this subset of the data base can be achieved by forming an over-all college call-in/write-in center where questions regarding the offerings of the college are recorded - before they are referred to the decentralized divisions - and a trending data subset is continuously updated. The underlying assumption is that the "service" division of the college (such as admissions, registration, purchasing, etc.) can be separated from the student educational planning divisions, i.e., service functions exist due to student needs. Once this data subset is effectively working, and immediate file updating becomes a reality (through terminal interaction at the time information is received), the implications can be presented in quantified form to college decision makers and to the community. It will also give direction for further analysis when discrepancies exist. (See Figure 2 for a relationship of input-process-output to the overall model in forming this subset of the data base.)

The major intent of this proposed project is to develop a valid, realistic model by which the educational system can research the education needs of the community - dynamically/continuously - and have the quantified data on which to base its decision for service to the community. It is further intended to computerize the model, and test the simulation processes over time until we can truly say that the model is the best possible vehicle available for sensing the educational needs and providing educational management with the best data for decision making. The model will then be exportable to any educational system in the nation for effective educational planning. It will be programmed in a computer language compatible with most operating systems to insure its universality and optimum usefulness. (See Figure 4 for interaction resulting in Prototype Development.)

To guarantee that this project is assimilated into educational planning, it is very important that the college administration be trained to understand and work with the needs assessment process. This process, when finally installed within the college administrative framework will become an integral part of it, involved on all levels. It will play a dual role, functioning both as a disseminator of information and as an information gathering network. For example, in student counseling, the information supplied by the project concerning community trends will be invaluable in giving the student realistic advice on career choice and placement. The counseling officer will also be a valuable part of the information gathering function, providing feedback on student interests and needs. The admissions office and the office of the registrar can provide other trending information on what is occurring.

These offices receive a wide variety of inquiries on possible course offerings and other college services that reflect the needs of a large segment of the population. This represents a primary information source that should be incorporated in any needs assessment project. Therefore, the analysis will hopefully result with the creation of a center that takes those inquiries regarding course offerings giving a central place where potential students can request information. It would also allow for an ongoing analysis of those inquiries getting an indication of demand in curriculum.


CURRICULUM INFORMATION COORDINATION
INPUT DATA IN CODED CATEGORY MERGE WITH EXISTING DATA
XISTING COLLEGE FFERINGS
EXISTING BUDGET ALLOCATION
DATA COLLECTED ON TRENDS
ESTIMATED PARAMETERS
DATA BANK FROM INFORMATION CENTER
SYSTEM PROGRAMS TO PROCESS DATA
CONSTRAINTS ON DATA AND SYSTEM
EDITING, ERROR CHECKING PROGRAMS REVISION
EXISTING COMPARED TO INTERESTS EXPRESSED AND FOLLOW-UP IN COMMUNITY (DISCREPANCY)
COMMUNITY NEEDS EXPRESSED TO COLLEGE VS. PRESENT ALLOCATION (DISCREPANCY)
REPORT ON CALLS BY PRIORITY OF INTERESTS
(ALSO DISCREPANCY)
PLANNERS
BUSINESS/ EMPLOYMENT/ INDUSTRY/ LABOR/ECONOMIC AREAS
GOED/HUD/SOCIAL/ CHAMBER OF COMMERCE/ CENSUS/POLITICAL/ CULTURAL etc.
CHANGE
NO
TERMINAL
YES
COLLEGE ADMINISTRATION
DIRECTION FOR SAMPLES TO BE FURTHER STUDIED
REACTION
SAMPLE OF COMMUNITY PRIORITY INTERESTS VERIFIED

CONTINUOUS UPDATING DATA FILE

Figure 2

On the other hand, direction can be given for continuous follow-up studies to evaluate the significance and/or effect of the changing instruction on the students. The follow-up analysis would, therefore, improve the budget distribution based on the effectiveness of one program as compared to another in meeting the individual needs of the citizens of the community.

SEQUENCE OF ACTIVITIES

Phase I: Data Base Development

This phase will lay the basic foundation upon which the model is to be built. It is extremely important that the model have an accurate and comprehensive data base if it is to provide a productive link between community and college.

First, there must be an identification of areas of educational need. This will follow a two-market approach; that is, needs will be identified relating to the provision of education for the job market and for continuing education. Educational needs will also be studied from the personal level, identifying needs for social and cultural development.

Since the basic model approach is that of a discrepancy model, this phase will also define specific items of educational need relative to the jobs under study. Thus, each job can be defined by the set of items which compose it. This same procedure can be followed in defining individual educational assets relative to jobs. The specific items of education that an individual may have can be broken down so that an individual may be identified for the purposes of the model in terms of these items.

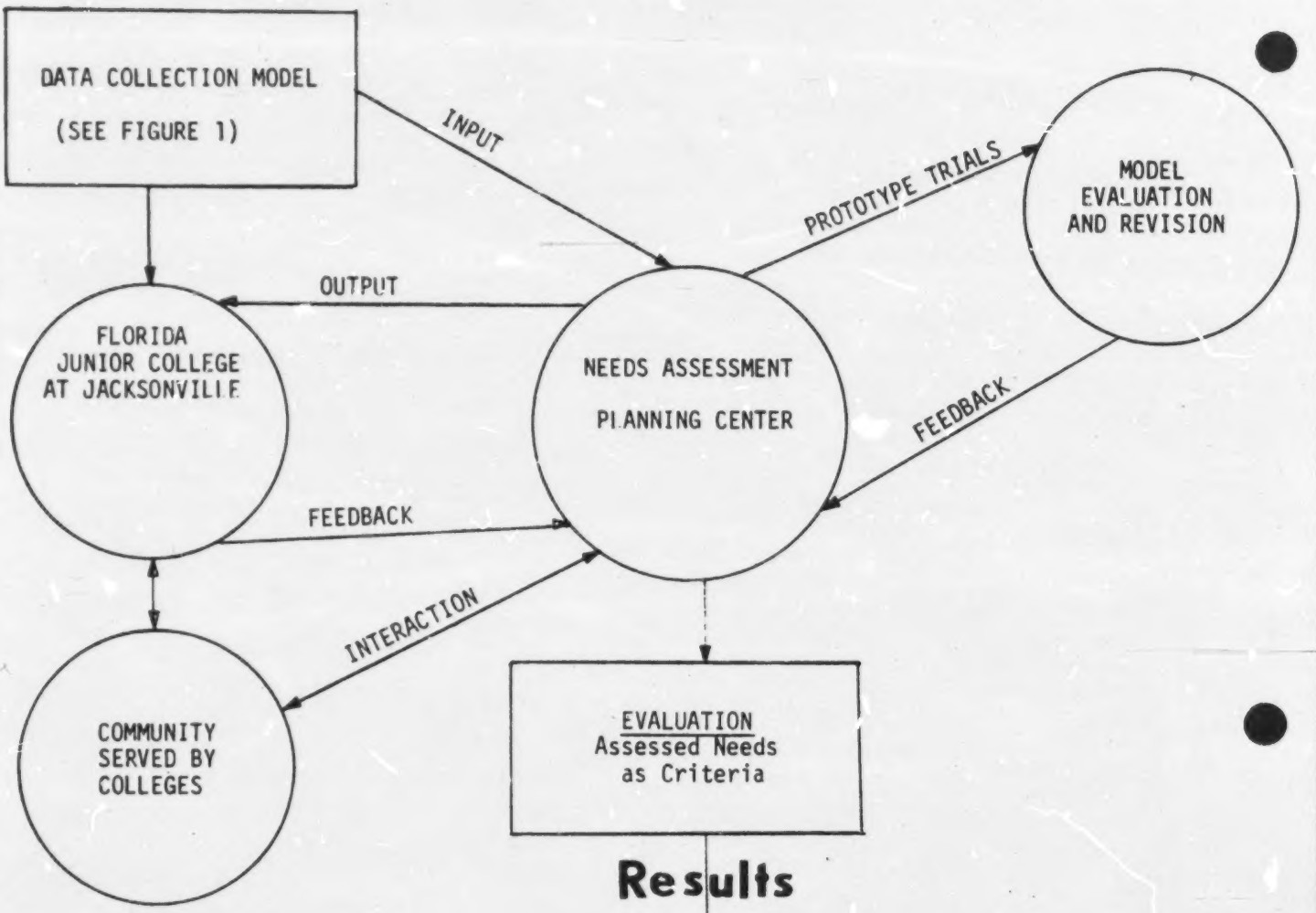
From these two sets of items, the model will then match the individual who possesses a given set of educational items with a job which requires a given set of educational items and produce the educational need that must be fulfilled by the school system.

The term "educational need" here does not only apply to job requirements. The Needs Assessment model will be extended to include personal, social and cultural needs as well.

Phase II: Initial Prototype Development

This phase consists of two basic parts. First is the establishment of the basic prototype structure. To be determined is the internal logic sequence the model will follow and what algorithmic procedures will be used in establishing relationships among variables. In order to do this, a preliminary hierarchy of needs will have to be determined and combined with the algorithmic subsets to develop a detailed program flow-chart.

Second in this phase is the development of a computerized framework for the model. To be determined here will be the appropriate computer language and the numerical techniques to be used for data generation. The detailed flow-chart will have to be converted into computer language and tested for inconsistencies with sample data.



Prototype Development

FIGURE 3
14

Phase III: Model Testing

This phase will test the model in three areas. First is the validity of its operating characteristics. This includes checking for errors in the variables themselves. Have variables that add little to the predictive capability of the model been included or have variables that are important not been included? Also, errors in the logic of the model must be tested.

Second, tests will be made on the dynamic capabilities of the model. Static characteristics will be removed where possible and tests run to insure that changes over time in the basic variables are incorporated in the model.

Third, the reliability of the model output data will be tested. Simulated data will be compared with historical data to determine predictive capabilities. The model will be studied for realism and also to insure the understandability of model output.

Phase IV: Model Evaluation and Verification

This phase is primarily interested in two areas. First, the accuracy of the model in describing the actual workings of the Needs Assessment logic flow will be evaluated. The evaluation will be in terms of whether or not the output data is in a suitable form for decision makers, sufficiently disaggregated to form judgments by area, and practical given the institutional framework in which it must be implemented.

And second, the parameter estimates of the model will be evaluated for bias and consistency. This involves continuous monitoring, evaluation and corrective feedback into the model.

Phase V: Model Revision

As a continuation of Phase IV, this phase will incorporate into the model the results of the previous evaluations. The model will also continue to be closely monitored and evaluated according to defined benchmark checkpoints in order to maintain control as progress occurs. At each checkpoint, if any deviation occurs from the guidelines, it will result in either a correction of the model itself or a revision of the guidelines to bring them more closely into accord with the developing recognition of the true needs.

Phase VI: Complete Documentation

One of the most important goals of the project is to build the model in such a way that it is replicable in other areas. This phase will identify potential recipients of the model and describe for them the models hardware constraints, software characteristics and application areas and uses. This involves extensive development of recipient/developer coordination in the distribution, training and follow-up procedures to insure optimum utilization.

SIGNIFICANCE OF NEEDS ASSESSMENT

The public education system exists to serve the society that operates it. The programs it offers, the type of education it gives its student, should reflect the needs of the society. In the 19th century that society was very uncomplicated with little need for highly trained workers. If a person was going to leave the farm to find work he had two major choices -- either work in large assembly line-type factories that required very little skill or enter into apprenticeship programs in which he was trained on the job. Thus the gap that public education filled in meeting the needs of the society was that of providing a literate populace. They were required to teach no specialized skills and as a result could work from the one classroom -- all grade-type school.

Many of the 19th century concepts have been carried over to the present day. Schools seem to still operate from the premise that they should provide only a general education aimed at producing a literate populace. This is no longer enough for today's complicated society. The community needs many and varied skills which can and should be provided by public education.

While not nearly enough has been done in this area, community colleges have taken major steps towards filling the gap. They are providing, at the community level, the wide variety of specialized training that is needed. But too often these colleges have operated on only intuition or political influence in providing programs, with little or no effort at assessing true community needs, or evaluating the college output, i.e., student, in terms of the assessed needs. This is not to say that the college should only be interested in meeting the job needs of the community. There are many personal and social needs of the student that can be provided by the community college to produce a better adjusted, well-rounded individual. Needs assessment and evaluation should be directed at both areas.

To move from subjective decision-making, with no assurance of data accuracy on educational needs, to objective decision-making based on accurate data requires a continuous simulation and analysis of relevant variables. The decision made at time t + 1 should be based therefore, on a higher degree of empirical quality than the decision made at time t. This is dependent upon two forms of evaluation: (a) the on-going evaluation of the realism of the data simulated as compared to the actual social system being analyzed, and (b) the continuous evaluation of the degree of change occurring in the social system (community), as well as the educational system (school). Thus, the major effect of Needs Assessment surfaces -- planned change through effective evaluation of community educational needs for all citizens.

A comprehensive evaluation program with an accurate needs assessment process behind it can be an effective instrument of change within the college and within the community. In the college, it should provide a more flexible and realistic program for the student, allowing him more opportunity to take what he needs for social and cultural growth and more channels of training according to his own potential in job skills. The student will become more responsible for his own development deciding more for himself, and earlier, what course of study he wants to follow. This puts greater responsibility on the student advisory personnel of the college, and requires a better job placement relationship with the community.

Witnin the community, the needs assessment model results in greater job and class mobility, higher individual self-concept, better knowledge to the individual for competing in his society, more help to the problem youth, and economic impact predictions for local environmental planning. As education becomes more responsive, it builds positive communication links between the community and educational system such that referendums presented to the public and legislation can gain greater acceptance. It also keeps education responsible to the clients for which it exists. The major contribution to the community, however, is in its forcefulness on ending isolation through more experience and exposure so more realistic goals for career choices can be made -- beyond whatever is available at the time they enter the job market.

> "Had God anticipated the eventual structure of the public school system He surely would have shaped man differently. Perhaps with a square little head to match his square little books and his square little classrooms. Surely He would have made man uniform in height to make lining up easier, in thought to make testing easier, and in sensitivity to make teaching him easier. Whether the Creator thought this work too dull, or too unimportant, He nevertheless ducked it and we kindly picked it up and have been occupying ourselves with it for a number of years." (13, p. 11)

The Educational System often becomes so bogged down in the maze of procedures, standards, divisions, and tradition that it forgets that its purpose and existence in the first place is for services necessary to help citizens realize their full potential. That is, education and any activities within the educational system, should exist only for the purpose of complementing instructional service. However, to do this, needs must first be assessed so that the priorities within instruction can be determined. It follows that discrepancies can be identified, resources be allocated more in line with needs, and valid decisions can be made through reliable quantification to evaluate the effectiveness and need of all management areas.

Needs Assessment can be a tool to help education be more responsive to the needs of the citizenry -- showing up discrepancies based on facts rather than guesswork. It is a tool so much better than anything we have now and can be revolutionary in bringing about positive change for the most important human process of all -- the education of man. It can be the vehicle by which the formal system moves from its existing state to what it should be.

CONCLUSION

The major intent of the Needs Assessment Project is to develop a valid, realistic model by which the education system can research the educational needs of the community in a continuous basis and have quantified data on which to base its decisions. In doing this the project will develop procedures for ranking educational needs, for determining budget

allocation guidelines according to need priorities, and ultimately develop a full cost-benefit approach to needs fulfillment. This will allow administration to change activities as they are needed, have justification when funds are requested, and provide accountability to the public for tax monies spent for the education of society.

It is further intended to computerize the model providing the capability for large data bases, fast and accurate analysis and also allowing administrations to ask "what if" questions. It is a major goal of the project that this model be fully exportable to any education system in the nation for effective educational planning.

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